What is claimed is:

1. A method for controlling power of a Base Station (BS) transmission signal, comprising:

adjusting a Frame Error Rate (FER) using a measure of Link Transmission Unit (LTU) errors.

2. The method of claim 1, wherein the signal is divided into frames, each frame being further divided into at least two LTUs, the method further comprising

receiving the signal at a Mobile Station (MS);

estimating the FER of the received signal;

calculating a number of LTU errors in a frame of the received signal; and

receiving a target FER at the MS, wherein the received signal FER is adjusted by

increasing a set point by an up step value when the estimated FER is greater than the received target FER, wherein the magnitude of the up step value depends on the calculated number of LTU errors; and

decreasing the step point by a down step value when the estimated FER is less than the target FER.

3. The method of claim 2, wherein the set point is a energy-per-bit-to-total-noise-density (Eb/Nt) set point.

4. The method of claim 3, further comprising

estimating the Eb/Nt of the received signal;

transmitting a power control command from the MS to the BS transmitter instructing the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point; and

transmitting a power control command from the MS to the BS transmitter instructing the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point.

5. The method of claim 2, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.

6. The method of claim 2, wherein each LTU comprises an LTU Cyclic Read Check (CRC) field and wherein calculating the number of LTU errors in a frame further comprises checking the LTU CRC field of each LTU in the frame.

7. The method of claim 2, wherein the magnitude of the up step value is provided by a lookup table that assigns an up step value for each possible number of LTU errors in a frame.

8. The method of claim 1, wherein the target FER is approximately one percent.

9. The method of claim 1, wherein the BS operates using Code Division Multiple Access (CDMA).

10. A method for controlling power of a Base Station (BS) transmission signal, comprising:

adjusting the signal power using a measure of Link Transmission Unit (LTU) error rate.

11. The method of claim 10, wherein the signal is divided into frames, each frame being further divided into at least two Link Transmission Units (LTUs), and wherein the signal power is adjusted by

receiving the signal at a mobile station (MS);

estimating the LTU error rate of the received signal;

receiving a target LTU error rate at the MS;

increasing a set point by an up step value when the estimated LTU error rate is greater than the target LTU error rate; and

decreasing the step point by a down step value when the estimated LTU error rate is less than the target LTU error rate.

12. The method of claim 11, wherein the set point is a energy-per-bit-to-total-noise-density (Eb/Nt) set point.

13. The method of claim 12, further comprising:

estimating the Eb/Nt of the received signal;

transmitting a power control command from the MS to the BS transmitter instructing the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point; and

transmitting a power control command from the MS to the BS transmitter instructing the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point.

14. The method of claim 11, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.

15. The method of claim 11, wherein each LTU comprises an LTU Cyclic Read Check (CRC) field and wherein estimating the LTU error rate further comprises checking the LTU CRC fields of the received signal.

16. A mobile station (MS), comprising:

a base station power control module that adjusts a base station signal power using a measure of Link Transmission Unit (LTU) errors.

17. The MS of claim 16, wherein the signal is divided into frames, each frame being further divided into at least two Link Transmission Units (LTUs), the MS further comprising

an receiver configured for receiving the signal from a base station (BS) transmitter and outputting a decoded signal of the received signal and a number of LTU errors in a frame of the received signal;

a Frame Error Rate (FER) estimator coupled to the MS receiver, the FER estimator configured for estimating an FER of the decoded signal from the MS receiver and outputting the estimated FER of the decoded signal; and

an outer loop power control coupled to the FER estimator, the outer loop power control configured for receiving the estimated FER from the FER estimator and the number of LTU errors from the MS receiver and a target FER, and for adjusting and outputting a set point, wherein the outer loop power control increases the set point by an up step value when the estimated FER is greater than the target FER, the magnitude of the up set value depending upon the number of LTU errors, and decreases the set point by a down set value when the estimated FER is less than the target FER.

18. The MS of claim 17, wherein the MS receiver outputs an estimated energy-per-bit-to-total-noise-density (Eb/Nt) of the received signal and the set point is an Eb/Nt set point, the MS further comprising

an inner loop power control for receiving the Eb/Nt set point from the outer loop power control and the estimated Eb/Nt from the MS receiver and outputting a power control command, wherein the power control command instructs the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point and the power control command instructs

the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point; and

an MS transmitter for receiving the power control command from the inner loop power control and transmitting the power control command to a BS comprising the BS transmitter.

19. The MS of claim 17, wherein the magnitude of the up step value is provided to the outer loop power control by a lookup table that assigns an up step value for each possible number of LTU errors of a frame of the received signal.

20. The MS of claim 17, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.

21. The MS of claim 17, wherein each LTU comprises an LTU Cyclic Read Check (CRC) field and the MS receiver estimates the number of LTU errors in a frame by checking the LTU CRC fields in the frame.

22. The MS of claim 18, wherein the MS transmitter receives a pilot signal, multiplexes the received power control command with the received pilot signal, and outputs the multiplexed pilot signal to the BS comprising the BS transmitter.

23. The MS of claim 16, wherein the signal is divided into frames, each frame being further divided into at least two Link Transmission Units (LTUs), the MS further comprising

an MS receiver receiving the signal from the BS transmitter and outputting a decoded signal of the received signal;

an LTU error rate estimator coupled to the receiver, the LTU error rate estimator estimating an LTU error rate of the decoded signal from the MS receiver and outputting the estimated LTU error rate of the decoded signal; and

an outer loop power control coupled to the receiver, the LTU error rate estimator receiving the estimated LTU error rate from the LTU error rate estimator and a target LTU error rate and adjusting and outputting a set point, wherein the outer loop power control increases the set point by an up step value when the estimated LTU error rate is greater than the target LTU error rate and the outer loop power control decreases the set point by a down set value when the estimated LTU error rate is less than the target LTU error rate.

24. The MS of claim 23, wherein the MS receiver outputs an estimated energy-per-bit-to-total-noise-density (Eb/Nt) of the received signal and the set point is an Eb/Nt set point, the MS further comprising:

an inner loop power control for receiving the Eb/Nt set point from the outer loop power control and the estimated Eb/Nt from the MS receiver, and outputting a power control command, wherein the power control command instructs the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point and the power control command instructs the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point; and

an MS transmitter for receiving the power control command from the inner loop power control and transmitting the power control command to a BS comprising the BS transmitter.

25. The MS of claim 23, wherein the magnitude of the up step value is provided to the outer loop power control by a lookup table that assigns an up step value for each possible number of LTU errors of a frame of the received signal.

26. The MS of claim 23, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.

27. A wireless communication system, comprising:

a base station (BS); and

a mobile station (MB), the MS including a base station power control module that adjusts a power level of a signal transmitted by the BS using a measure of Link Transmission Unit (LTU) errors.

28. The system of claim 27, wherein the signal is divided into frames, each frame being further divided into at least two Link Transmission Units (LTUs), the MS further comprising

an receiver configured for receiving the signal from a transmitter in the BS, the receiver outputting a decoded signal of the received signal and a number of LTU errors in a frame of the received signal;

a Frame Error Rate (FER) estimator coupled to the MS receiver, the FER estimator estimating an FER of the decoded signal from the MS receiver and outputting the estimated FER of the decoded signal; and

an outer loop power control coupled to the FER estimator, the outer loop power control receiving the estimated FER from the FER estimator and the number of LTU errors from the MS receiver and a target FER, and adjusting and outputting a set point, wherein the outer loop power control increases the set point by an up step value when the estimated FER is greater than the target FER, the magnitude of the up set value depending upon the number of LTU errors, and decreases the set point by a down set value when the estimated FER is less than the target FER.

29. The system of claim 28, wherein the MS receiver outputs an estimated energy-per-bit-to-total-noise-density (Eb/Nt) of the received signal and the set point is an Eb/Nt set point, the MS further comprising

an inner loop power control for receiving the Eb/Nt set point from the outer loop power control and the estimated Eb/Nt from the MS receiver and outputting a power control command, wherein the power control command instructs the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point and the power control command instructs the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point; and

an MS transmitter for receiving the power control command from the inner loop power control and transmitting the power control command to a BS comprising the BS transmitter.

30. The system of claim 28, wherein the magnitude of the up step value is provided to the outer loop power control by a lookup table that assigns an up step value for each possible number of LTU errors of a frame of the received signal.

31. The system of claim 28, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.

32. The system of claim 28, wherein each LTU comprises an LTU Cyclic Read Check (CRC) field and the MS receiver estimates the number of LTU errors in a frame by checking the LTU CRC fields in the frame.

33. The system of claim 29, wherein the MS transmitter receives a pilot signal, multiplexes the received power control command with the received pilot signal, and outputs the multiplexed pilot signal to the BS comprising the BS transmitter.

34. The system of claim 27, wherein the signal is divided into frames, each frame being further divided into at least two Link Transmission Units (LTUs), the MS further comprising

an MS receiver receiving the signal from the BS transmitter and outputting a decoded signal of the received signal;

an LTU error rate estimator coupled to the receiver, the LTU error rate estimator estimating an LTU error rate of the decoded signal from the MS receiver and outputting the estimated LTU error rate of the decoded signal; and

an outer loop power control coupled to the receiver, the LTU error rate estimator receiving the estimated LTU error rate from the LTU error rate estimator and a target LTU error rate and adjusting and outputting a set point, wherein the outer loop power control increases the set point by an up step value when the estimated LTU error rate is greater than the target LTU error rate and the

outer loop power control decreases the set point by a down set value when the estimated LTU error rate is less than the target LTU error rate.

35. The system of claim 34, wherein the MS receiver outputs an estimated energy-per-bit-to-total-noise-density (Eb/Nt) of the received signal and the set point is an Eb/Nt set point, the MS further comprising:

an inner loop power control for receiving the Eb/Nt set point from the outer loop power control and the estimated Eb/Nt from the MS receiver, and outputting a power control command, wherein the power control command instructs the BS transmitter to increase its transmission power when the estimated Eb/Nt is less than the Eb/Nt set point and the power control command instructs the BS transmitter to decrease its transmission power when the estimated Eb/Nt is greater than the Eb/Nt set point; and

an MS transmitter for receiving the power control command from the inner loop power control and transmitting the power control command to a BS comprising the BS transmitter.

36. The system of claim 34, wherein the magnitude of the up step value is provided to the outer loop power control by a lookup table that assigns an up step value for each possible number of LTU errors of a frame of the received signal.

37. The system of claim 34, wherein the set point is a energy-per-Walsh-code-to-total-noise-density (Ew/Nt) set point.